



**Commander, U.S. Pacific Fleet  
Naval Post Graduate School  
Submarine Officer's Ball  
Admiral Cecil Haney  
Saturday, 28 April 2012  
Monterey, California  
As Prepared for Delivery**

Thank you Admiral Ellis for that introduction and for asking me to speak here at the Naval Post Graduate School's Submarine Birthday Ball.

What an honor to be here tonight at my alma mater and what an honor to receive the Distinguished Alumnus Award. Thank you.

Distinguished guests, faculty, veterans, ladies and gentlemen, and especially my fellow submariners: Happy 112<sup>th</sup> Birthday!

It's my pleasure and honor to be here to celebrate with an audience that values the defense of our nation, that values our Navy, and that values our submarine force.

What a great audience here tonight, we even have a celebrity in the room. Admiral Ekeland who gave us the Ekeland Range formula is here. Thank you Admiral for that tremendous contribution as well as so many others that you have given the submarine force.

We also have among us someone who was qualified in submarines way back in 1949. RMCS Theodore Dick, I know that you were witness to many of the milestones in our history that I'll be talking about tonight. Thank you for being here.

Admiral Jerry Ellis and wife Rosemary who have been critical to my career. Thank you both for your mentorship and friendship for both Bonny and I.

Dr. Don Brutzman – classmate and friend, thanks for the intellect you continue to bring to each of our conversations and your work here.

Also great to see Don Free here, another US Naval Academy classmate.

Finally, LT Steven Hunt-A submariner who is the son of VADM Richard Hunt, Commander Naval Surface Forces. Now here is an individual whose Dad leads the surface Navy, yet he sees the light and chooses submarines.

What a fantastic team here and a great venue.

Tonight's theme is "sixty years of nuclear submarines". What an inspiring theme to speak on. Our nuclear submarine force has such a rich history and heritage to look back upon. We have so much to celebrate and such a solid foundation to continue to build on for the next sixty plus years.

We have come a long way since an inventor by the name of John Holland developed that 7-man submarine named *Holland* that he sold to the Navy. The *Holland* was powered on the surface by an internal combustion engine and by electric motors while submerged.

For more than fifty years after the launch of *Holland*, our submarines continued to run exclusively on combustion engines and electric motors. I might add that this configuration contributed to the World War II success where 55% of all enemy ships

sunk were last seen through the sites of a periscope. This configuration was also used during the Korean War and the onset of the Cold War.

The vision of an eccentric Navy Captain by the name of Hyman Rickover would forever change the way we do business in our submarine community. Sixty years ago this June, the keel was laid for the submarine that would realize Rickover's vision of powering a submarine by splitting the atom. That boat was called the *Nautilus*.

*Nautilus* was launched in 1954 and on her first underway in January 1955 she transmitted her historic message "Underway on Nuclear Power." Limited only by her crew's occasional desire to see their families and sunlight, *Nautilus* broke endurance records for time submerged and for speed. Her nuclear power source enabled her to sail beneath the polar ice cap and became the first watercraft to reach the geographic North Pole.

Senior Chief Theodore Dick, who I mentioned earlier is connected to this story. In 1952 when USS *Wahoo* was placed in commission, his CO was Eugene Wilkinson, who became the first CO of *Nautilus*. *Wahoo* must have been a good ship because the second CO of *Nautilus* also came from there as well. Senior Chief Dick did go on to the nuclear submarine, USS *Skate* (SSN 578) and was onboard when *Skate* made her 10 day exploration under the ice cap and was the first ship to surface at the North Pole. I understand you even made it into an edition of Mad Magazine as a result of that, right?

The sailing of *Nautilus* ushered in a whole new era. Most of us in this room tonight have always known a Navy with nuclear powered submarines and aircraft carriers. Almost to the extent that we take nuclear power for granted.

So, why is it that nuclear power has been so successful?

This innovative use nuclear physics did not come easy. The obstacles that Rickover had to overcome just to get the leadership in the Navy, much less our government, to support the creation of a nuclear powered navy was virtually insurmountable. The world at the time, just as now, was fearful of the word “nuclear.” Any accident, no matter how contained, could sink the project. The risks were high, but Rickover believed he could do it safely.

In the late 1940’s, when then Captain Rickover began to work on the *Nautilus* project, nuclear reactors in existence were the size of a city block. None had ever been designed to turn water to steam. The technology to build components from exotic metals had not been fully developed. Yet within five years of getting the green light to build *Nautilus*, the technology had been developed and her keel was laid.

Now, sixty years later, as we operate *Los Angeles*, *SeaWolf* and *Virginia* Class SSNs, and *Ohio* Class SSGN and SSBN nuclear submarines, the navy is still safely using nuclear power in ways I can’t discuss in this unclassified forum, ensuring that we maintain our undersea dominance, that as the Commander of the Pacific Fleet, I require.

Much of our success stems from an engineering concept put into place by Rickover and built on the warfighting ethos of our World War II submarine veterans. You might recall how much discipline we had to achieve given the problems we had with our own torpedoes during World War II.

So what did Rickover demand:

- Ownership – A person doing a job must feel that he owns it and will remain on that job indefinitely.
- Responsibility – He felt that shared responsibility meant no one was responsible.
- Attention to Detail – If the boss is not concerned about the details, his subordinates won't be.
- Priorities – You must apply self discipline to ensure your energy is applied where it is most needed.
- Know what is going on – Establish simple and direct means to find out what is going on in detail in the areas of your responsibility; for most in the audience we recognize this in terms of the Rickover or Donald letters.
- Work Hard – I think that is enough said on that topic.
- Checking Up – The need to have work checked by an independent source such as the ORSE board.
- Facing the Facts – Resist the inclination to hope things will work out, despite evidence to the contrary, and brutally make the needed changes.

But these principles would not be complete without the serious attention Rickover believed was required to have a competent, highly skilled and innovative workforce. He implemented:

- A rigorous selection process that included an interview with him.
- Rigor in training and qualification programs like nuclear power school, prototype and a continuous training program.
- Enforcement of procedure compliance and a deep understanding of nuclear propulsion plant operations.

- Rigor in examinations – Engineering exams, PCO schooling, and inspections like PORSE/ORSE.
- He would call CO's directly and send the posse from the Naval Reactors Representative Office to verify that he got what he inspected, not what he expected.
- He demanded we work hard to understand the physics and associated material and chemical science associated with all aspects of our trade.
- He demanded a team perform to a level of perfection and instilled a culture of integrity and trust.
- Finally, he insisted upon a culture that valued a questioning attitude, that demands that we get to the bottom of any discrepancies noted in our equipment or personnel performance associated with their operation of this critical and intricate technology.

There may be some of you in this room that might doubt these Rickover principles. The loss of the space shuttle not too long ago revalidated the approach.

So, your next question for me might be “How do I apply this here at Naval Post Graduate School – Didn't I leave this at the hatch when I left my last submarine?”

Today, I spent my morning amazed by some of the outstanding research being conducted here. I look at the talent of the folks in the audience here and the men and women of the submarine force that serve in the Pacific Fleet. I see talent, enthusiasm, hard work, questioning attitudes getting the business right for our country; carrying out the Rickover principles day in and day out.

I couple this with the capabilities of the Virginia class and the ingenuity of our latest submarine class; having gone to sea on several of this class: I get excited about things like the reconfigurable torpedo room with its payload volume for the future and the state of the art control room ensuring our readiness for the future.

I further couple this with the sophistication of the supporting industrial base including our institutions doing Research and Development.

Bottom line – We have the best, largest, safest Nuclear Submarine Force in the world today and given the tremendous ingenuity and determination of folks like you, I would predict, we will have a lot more chapters of nuclear submarine history to write involving new and innovative approaches.

Too often today we read headlines that question whether America is in decline. Just look at the talent in this ballroom tonight. I see before me a room of submariners who value education and are once again attending class to further their education goals and the principles of Admiral Hyman G. Rickover.

By taking what you have learned here at the Naval Post Graduate School and applying it beyond the campus, you will continue to make the Navy better. I have confidence that this and future generation of submariners will continue to carry out the legacy of the submarine force and through your efforts will ensure America's security and prosperity.

Someone at your table may invent some new tactic or do something just as significant as Admiral Ekelund. As Admiral Ekelund stated - "As I worked my way up to being an XO, then a CO, I always urged people to communicate about problems and

philosophies,” Admiral Ekelund said. “There are whole bunches of people who understand the problems out there. Only you might know the answer.”

Finally, remember this special period we are entering. In May we celebrate the 70<sup>th</sup> anniversary of our victory in the Battle of Coral Sea. In June we celebrate our 70<sup>th</sup> anniversary of our victory in the Battle of Midway. These victories were not won by superior technology, tactics, or even superior ships, they were won by the fighting spirit and determination of those brave men who fought in those battles. They were Sailors just like you.

Know that I’m proud of all that you do and all that you will continue to do for our submarine force, our Navy and our country.

God Bless our grateful nation, our Navy, and all those who serve in the world’s finest submarine force.

Happy 112<sup>th</sup> Birthday!